

## APPENDIX No. 4

against the bank it digs in and washes the earth away, and wherever it leaves the bank it leaves a bar. At the lower end of these bars is always found a fine silt and at the upper end it is chiefly gravel, and as the river cleans out the bar at the upper end it keeps adding to it below. The river being so muddy you cannot tell where you are going to run on a bar; you are on the bar before you know it, even when you are going in a canoe.

*By Mr. Lake:*

Q. While you are on that subject, I think perhaps you may have referred to this matter before, but there has been some comment in the press lately, possibly it is an old story, of the possibility of the Saskatchewan breaking into the Qu'Appelle Valley. There has been some correspondence in the press recently on the matter, and there may be some alarm in reference to the question, and I thought you would not mind telling us your opinion on the matter from your observations.

A. Certainly. Two years prior to that book being written, that is 28 years ago, I was commissioned by, I might say Sir Charles Tupper, it was Sir Sandford Fleming who instructed me to go into this country and to go between latitude 51 degrees and 52 degrees after going to the 102 meridian, and start from there and go north-westerly. But particularly I was instructed by Colonel Dennis, who was deputy minister at that time, to go and examine and see whether they could not cut a canal between the head of the Qu'Appelle and the Saskatchewan, because it was then reported there was no difficulty about turning the waters of the Saskatchewan into the Qu'Appelle. I had two surveyors with me, and we camped at the elbow of the Saskatchewan there. There is a little river—well, the river is not wider than that (illustrating)—it is called the 'River that Turns.' This little river runs into the Saskatchewan just at the bend. Here (indicating on map) is the head of the Qu'Appelle river. Well, I sent one of my surveyors, Mr. Wilkins, to take levels across the head of the Qu'Appelle river to the Saskatchewan, and our hopes were dispersed. There was 85 feet difference in the levels; that is, the level of the Saskatchewan about the middle of July was 85 feet below the source of the Qu'Appelle.

Q. What was the distance between the two rivers?

A. Eleven and one-half miles, by their measurement.

Q. And at that distance the level of the Saskatchewan was 85 feet lower than the water in the Qu'Appelle valley?

A. Than the source of the Qu'Appelle.

*By Mr. Wright (Renfrew):*

Q. I understood you to say, at the last meeting, that you saw wheat growing on saline soil. Is that so?

A. Yes. When I used the term saline soil, I did not mean what is commonly called salt soil. I will put it in another way. I saw wheat growing on the land that we formerly thought would not grow anything, what they called bad soil, that was unfit for anything. I had that view myself, but I know better now. Saline soil is a better soil after it is broken up, because it contains more of the ingredients that make good straw and wheat.

*By Mr. Burrows:*

Q. Is that what we call gumbo?

A. Very likely it is what you call gumbo.

## NAVIGATION ON THE SASKATCHEWAN RIVER.

*By Mr. Herron:*

Q. With reference to navigation, did the Hudson's Bay Company at any time send steamers up the Saskatchewan river to Edmonton?